REMARKS

This is in response to the Office Action mailed on June 25, 2003. In the Office Action, claim 1-2, 6-8, and 12 are rejected, claims 4-5 and 9-11 are objected to as being dependent upon the rejected base claim, and claims 13-17 are allowed. The Applicant graciously acknowledges allowance of claims 13-17.

Claim 1 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner states that it is not clear from the claim how the means for selectively altering the position of the slider is mounted to the means for flexibly coupling the stationary region of the load beam to the moving region of the load beam. As discussed in previous amendments in response to Office Actions in this matter, claim 1 contains three elements, two of which are set forth in means-plus-function form, as prescribed by 35 U.S.C. § 112, paragraph 6. Thus, those two elements must be interpreted as limited to the corresponding structure described in the specification and equivalence thereof. See MPEP 2181, citing *In re Donaldson Company*, 29 U.S.P.Q.2d (BNA) 1845 (Fed. Cir. 1994).

The second element of claim 1 recites "means for flexibly coupling the stationary region of the load beam to the moving region of the load beam." The corresponding structure for this means is defined in the specification and drawings of the present application as a flexible beam 48, which connects the stationary region of the load beam to the moving region of the load beam. The corresponding structure is not defined as preload bend legs 40a and 40b as characterized by the Examiner. The third element of claim 1 recites "means for selectively altering a position of the slider with respect to the rotatable disc, the means for selectively altering mounted to the means for flexibly coupling and the means for selectively altering extending from the distal end of the stationary region to a proximal end of the moving region generally along a longitudinal centerline of the stationary region." The corresponding structure for the means for selectively altering is defined in the specification and drawings of the present application as a bending motor 32 mounted to flexible beam 48.

In the specification (at page 6, lines 17-23) Applicant describes how the means for selectively altering (bending motor 32) is mounted to the means for flexibly coupling (flexible beam 48) and at least two methods for mounting are disclosed. The corresponding structure is described in the specification to include an adhesive or a mechanical fastener. Thus, claim 1 is not amended to specifically recite how the means for selectively altering is mounted to the means for flexibly coupling as the corresponding elements for the means-plus-function elements are described in the specification. The language "the means for selectively altering mounted to the means for flexibly coupling" is sufficient to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 1-2, 6-8, and 12 are rejected under 35 U.S.C. §102(e) as being anticipated by Kant et al. Kant et al. discloses a unitary synchronous flexure microactuator 50. Flexure microactuator 50 is attached to a distal end of load beam 18 to provide high resolution head positioning and to finely position the transducing head over a selected track of a rotating disc. Microactuator 50 is secured to a distal end of the load beam and is effectively suspended within an aperture 65 of load beam 18. Flexure microactuator 50 includes a unitary structure having plate portions 76 and 78 and bent-up beams 52 and 54 extending between the plate portions, forming aperture 79 therebetween. Slider support member 66 is attached to beams 52 and 54 so as to be suspended within aperture 79 therebetween. Piezoelectric element 62 is attached to beam 52 and piezoelectric element 64 is attached to beam 54. Expansion and extraction of piezoelectric elements 62 and 64 displaces and bends beams 52 and 54 to displace slider 24 supported by support member 66. (Cols. 2-3, lns 2:67-3:15).

In claim 1, the flexible beam is a structural element which connects the stationary region of the load beam to the moving region of the load beam, whereas the bending motor is the actuating element mounted to the flexible beam which extends from the stationary region to the moving region generally along a longitudinal center line of the stationary region. The bending motor operates as the bendable cantilever to alter the position of the moving region with respect to the stationary region and effect high resolution positioning of the transducing head.

In order for a prior art reference to anticipate claim 1, the reference must teach elements that perform the identical function specified in claim 1. In addition, the structure of the prior art elements must be the same as or equivalent to the structure described in the specification that corresponds to the claimed means-plus-function elements. See MPEP 2182. Therefore, in order to anticipate claim 1, Kant et al. must disclose a structure which is the same as or equivalent to the present invention. In order for a prior art element to be equivalent to a means-plus-function limitation, the prior art element must perform the identical function specified in claim 1 in substantially the same way and produce substantially the same result as the means-plus-function limitation in claim 1. *Kemco Sales Inc. v. Control Papers Co., Inc.*, 208 F.3d 1352, 54 U.S.P.Q.2d 1308 (Fed. Cir. 2000).

Kant et al. does not disclose a prior art element which substantially performs the stated function of the second element of claim 1, flexibly coupling a stationary region of the load beam to a moving region of the load beam. Kant et al. does not disclose a load beam having a stationary region and a moving region. Load beam 18 is stationary and microactuator 50 is attached to the distal end of the load beam by plate portions 76 and 78. Microactuator 50 includes a moving portion, namely beams 52 and 54, to displace the slider. Beams 52 and 54 are part of the microactuator 50, and form part of the unitary structure of the microactuator to connect plate portion 76 and 78 and form aperture 79 therebetween. (See FIGS. 3, col. 2-3, lns. 2:67-3:2). However, beams 52 and 54 do not couple a stationary region of the load beam to a moving region of the load beam, as the load beam of Kant et al. does not include moving region.

In addition, piezoelectric elements 62 and 64 of Kant et al. are not structures that are the same as or equivalent to the structure described in the specification which corresponds to the means for selectively altering the position of the slider limitation recited in claim 1. Kant et al. does disclose a microactuator element which performs a selectively altering function as specified in claim 1 (i.e., means for selectively altering a position of the slider with respect to the rotatable disc). However, piezoelectric elements 62 and 64 of Kant et al. are excluded by an explicit definition provided in the specification of the present application and in claim 1. In the present application,

bending motor 32 is mounted to flexible beam 48, flexible beam 48 couples the stationary region of the load beam and the moving region of the load beam, and bending motor 32 extends from a distal end of the stationary region to a proximal end of the moving region generally along a longitudinal centerline of the stationary region.

Kant et al. does not disclose a load beam having a stationary region and a moving region. Therefore, the piezoelectric elements 62 and 64 of Kant et al. cannot extend from a distal end of a stationary region of the load beam to a proximal end of a moving region of the load beam. Rather, in Kant et al., microactuator 50 is connected to a distal end of the load beam and beams 52 and 54, with piezoelectric elements 62 and 64 attached, form part of the unitary structure of microactuator 50 and do not attach to load beam 18 or connect a stationary portion of a load beam to a moving portion of a load beam. In addition, piezoelectric elements 62 and 64 of Kant et al. do not extend generally along a longitudinal centerline of the load beam between a stationary region and a moving region, as required by claim 1.

A comparison of the teachings of Kant et al. to the structure disclosed in the present application reveals differences between the microactuator of the present invention, and the microactuator of Kant et al., and precludes a finding that the two systems are interchangeable or equivalent. Microactuator 50 of Kant et al. is not mounted to a flexible beam, nor does load beam 18 include a stationary region and a moving region with a flexible beam and microactuator extending therebetween. Although plate portions 76 and 78 are attached to load beam 18, the plate portions and load beam are all stationary. Kant et al. does not disclose or teach a microactuator that moves a moving region of the load beam with respect to the stationary region of the load beam (as recited by claim 1 of the present application). Kant et al. does not anticipate claim 1 and the rejection of claim 1 under 35 U.S.C. §102(e) should accordingly be withdrawn.

Kant et al. does not teach, suggest, or disclose the claimed invention recited in claim 2 of the present application. Claim 2 recites a microactuation system including a bending motor attached between the first section of the load beam and the flexure, the bending motor being deformable in response to a control signal applied thereto, and a flexible beam connected between

the first section of the load beam and the flexure wherein the bending motor is attached to the flexible beam. Kant et al. does not disclose a flexible beam or bending motor connected between a load beam and a flexure. Rather, Kant et al. teaches load beam 18 with flexure microactuator 50 attached to the distal end of the load beam. The microactuator of Kant et al. includes beams 52, 54 with piezoelectric elements 62, 64 connected thereto to deform a slider carrying portion 66 of the microactuator with respect to plate portions 76, 78 of the microactuator. However, beams 52, 54, and piezoelectric elements 62 and 64 are not connected between the load beam and a flexure, but rather form the unitary portion of the flexure microactuator.

Because Kant et al. does not yield the present invention as defined by claim 2, the rejection of claim 2 under 35 U.S.C. §102(e) should be withdrawn. In addition, claims 2, 6-8 and 12 depend from allowable claim 2, and therefore are allowable as well. Allowance of claims 1-2 and 4-12, in addition to the previously allowed claims 13-17, is respectfully requested.

Respectfully submitted,

KINNEY & LANGE, P.A.

Date: 9/9/03

By: _____

Gayle A. Bush, Reg. No. 52,677
THE KINNEY & LANGE BUILDING
312 South Third Street
Minneapolis, MN 55415-1002
Telephone: (612) 339-1863
Fax: (612) 339-6580

GAB:amh